The MAYRON COLE PIANO METHOD

# Compose Yourself!

"If I were not a physicist, I would probably be a musician. I often think in music. I live my daydreams in music. I see my life in terms of music." - Albert Einstein

Through the years, many people have asked me to teach them the skills of composing music. These theory pages are an attempt to put into words some of the thought processes that I go through when composing.

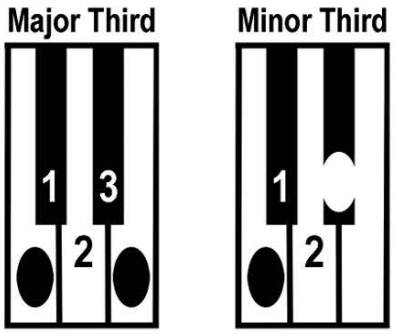
- Mayron Cole



## Chords

To understand the mechanics of composing a piece of music, we must first understand chords and their functions. Chords may be built on every tone of any major or minor scale, but we will be composing with only major scales in this book. Since all major scales are transposed C Major Scales, we will discuss the chords built on every tone of the C Major Scale. You can then take this knowledge and apply it to every major scale.

Chords are built by stacking thirds on top of each other. The types of thirds most often used are major thirds and minor thirds. Major thirds skip three keys (black and white keys); minor thirds skip two keys.




At least three tones (two thirds) are required to form a chord. A three-tone chord is called a triad. A four-tone chord is called a seventh chord. A five-tone chord, used mostly in jazz, is called a ninth chord. Just a reminder, two tones are called an interval; examples of intervals are a third, a fifth, or an octave.



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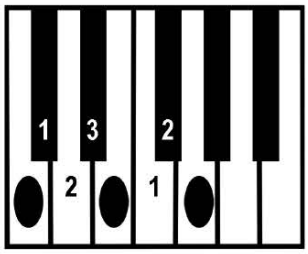
# Building Triads
## (Three-Tone Chords)

Using our knowledge of thirds, we can build different types of triads by stacking two thirds atop each other. When a chord is in root position, the lowest tone of the chord is the chord's letter name. The abbreviation for a major third is "M," and the abbreviation for a minor third is "m."

### Major Triad

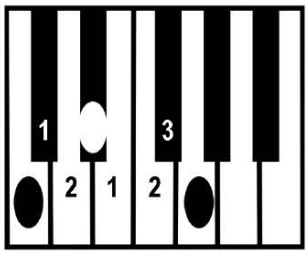
major third on bottom + minor third on top
(abbreviated as "Mm")




This example is a C Major Triad, also known as a C Major Chord.

### Minor Triad

minor third on bottom + major third on top
(abbreviated as "mM")




This example is a C Minor Triad, also known as a C Minor Chord.
A minor chord is identified with its letter name followed
by a lower-case "m". Example: Cm

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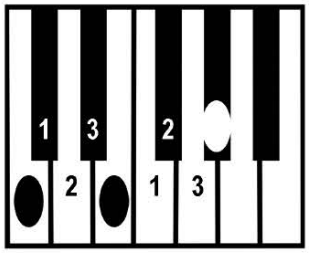
### Augmented Triad

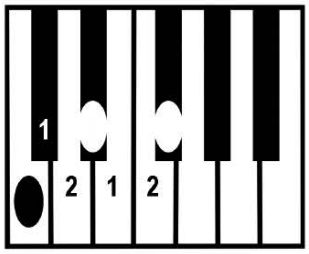
major third on bottom + major third on top
(abbreviated as “MM”)




This example is a C Augmented Triad, also known as a C Augmented Chord.
An augmented triad is identified with its letter name followed by
lower-case "aug" or by a “+” sign. Like this: C aug or $C^{+}$

### Diminished Triad

minor third on bottom + minor third on top
(abbreviated as “mm”)




This example is a C Diminished Triad, also known as a C Diminished Chord.
A diminished triad is identified with its letter name followed by
lower-case "dim" or by a small "o". Like this: C dim or $C^{\circ}$

## Building 7th Chords
### (Four-Tone Chords)

You can also build 4-note chords by stacking three thirds on top of each other. Every major scale will have a dominant seventh that can be built on the 5th tone of that particular scale. Seventh chords are identified with a small "7" after the chord’s letter or number. Like this: $G^{7}$ or $V^{7}$.

In a $G^{7}$ chord, the "7" means the tone that is a seventh above G has been added to the chord. The tone a seventh above G is F; so the $G^{7}$ chord is G B D F. In the scale of C Major, another name for the $G^{7}$ chord is Dominant 7th.



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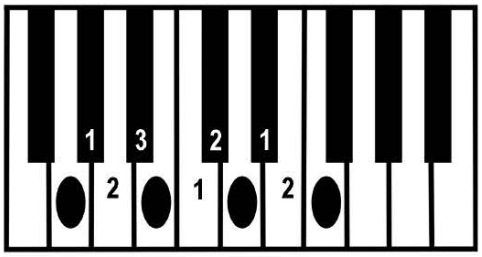
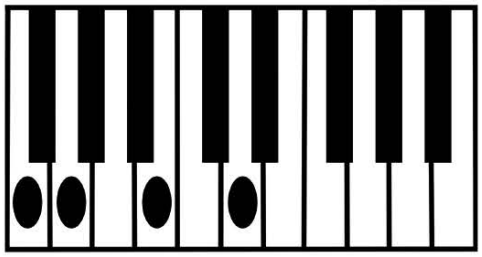
## DOMINANT 7TH CHORD

major third on bottom + minor third in middle + minor third on top
(abbreviated as "Mmm")




This example is a $G^7$ chord, also called the Dominant 7th.

Dominant 7th chords are often played inverted. When a 7th chord is inverted, you will have a second in the chord's tones. The highest tone of the second is the name of the 7th chord that has been inverted:



It is important that you know how to build a Dominant 7th Chord because you will be using it quite a bit when composing your masterpiece. You will also use it when you modulate to a different key.

A 7th chord can be built with many different combinations of thirds. It is the Mmm combination which forms a Dominant 7th chord.

Another very important tip is that every "Mmm" chord wants to move to the chord that is a fifth below it. Usually that is the Tonic Chord, but not always. However, the composer can force the $V^7$ chord to move to one of the Tonic Chord's substitute chords which are the iii chord and the vi chord (see the section on "Secondary Chords" for details).



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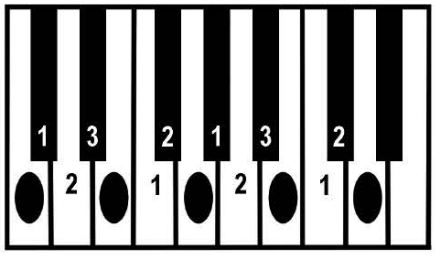
# Building 9th Chords
## (Five-Tone Chords)

Ninth chords are used primarily in jazz. Stacking four thirds on top of each other produces ninth chords.

### 9TH CHORD

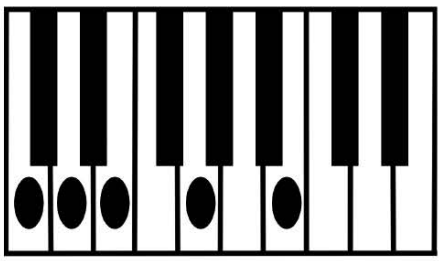
major third + minor third + major third + minor third
(abbreviated as "MmMm")

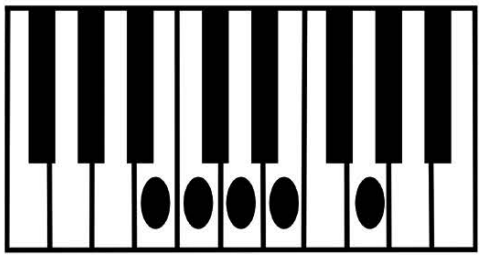




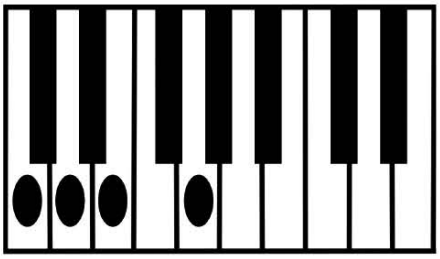

This example is a C 9th Chord.

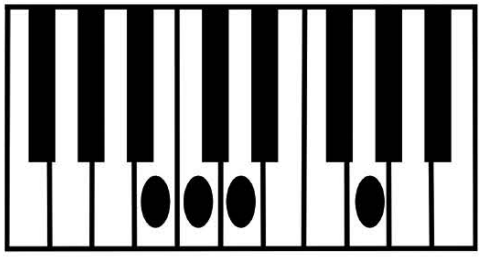
9th chords are usually played inverted since a ninth is difficult to reach. But an easy rule to follow is to add the tone a major 2nd above the root tone and you are adding the 9th tone to the chord. For example, a ninth above C is D. So you could play C D E G B or B C D E G:





In either of the inversions above, the B C D E cluster will sound muddy so omit either the E or the B. Remember to leave the D in your chord, so you have the sound of the 9th:







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# Roman Numerals, Chords, & Chord Types

There are seven tones in every scale and each tone has an assigned Roman numeral:

| Roman Numeral | Tone |
|---|---|
| I | C |
| ii | D |
| iii | E |
| IV | F |
| $V^7$ | G |
| vi | A |
| $vii^o$ | B |

We can build a chord on each degree in the scale. Use the key signature of the scale to determine if there will be any sharps or flats in the chord. Since we are using the C Major Scale, we will have no sharps or flats in our chords:

| Roman Numeral | Chord |
|---|---|
| I | C e g |
| ii | D f a |
| iii | E g b |
| IV | F a c |
| $V^7$ | G b d f |
| vi | A c e |
| $vii^o$ | B d f |



Let's take a look at what types of chords we have just built:

| Roman Numeral | Chord | Chord Type |
|---|---|---|
| I | C e g | Major |
| ii | D f a | Minor |
| iii | E g b | Minor |
| IV | F a c | Major |
| $V^7$ | G b d f | Major |
| vi | A c e | Minor |
| $vii^o$ | B d f | Diminished |

You will notice that the major chords are indicated with a capital Roman numeral, and that the minor chords are indicated with a lower case Roman numeral. The small $^o$ next to the vii signifies that the chord is diminished, comprised of two minor thirds. For an augmented chord, comprised of two major thirds, you can write a + beside the chord's letter name or you can write "aug" beside the chord's letter name.

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# Chord Status

Each major chord will have a status of a Primary Chord, and each minor chord will have a status of a Secondary Chord:

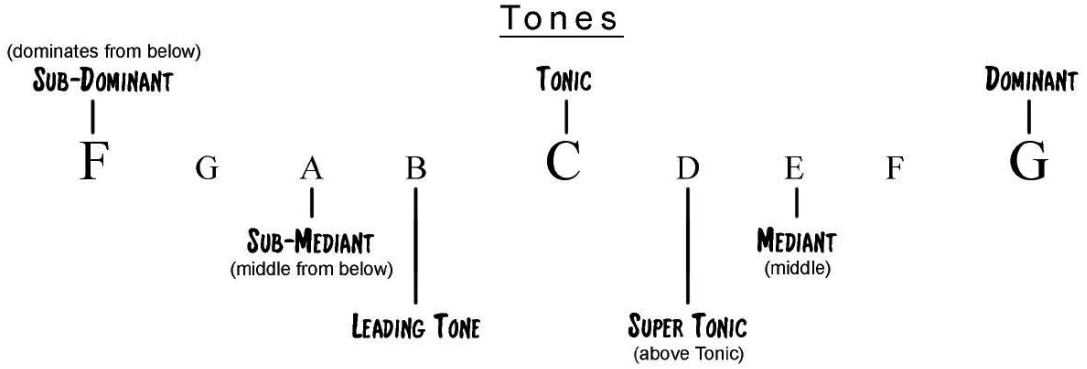
| Roman Numeral | Chord | Chord Type | Status |
|---|---|---|---|
| I | C e g | Major | Primary Chord |
| ii | D f a | Minor | Secondary Chord |
| iii | E g b | Minor | Secondary Chord |
| IV | F a c | Major | Primary Chord |
| $V^7$ | G b d f | Major | Primary Chord |
| vi | A c e | Minor | Secondary Chord |
| $vii^o$ | B d f | Diminished | Secondary Chord |

The $vii^o$ or Bdf chord is classified as a Secondary Chord but it is going to function as an incomplete Primary $G^7$ chord. Why? Bdf are the top three tones of the G7 chord. So is the diminished B chord a true Secondary Chord or is it an incognito Primary Chord? That question has long been asked by music theorists! The diminished B chord is indeed a strange little chord!



# Scale Degree

It is now time to discuss the scale degrees, but we must first learn the names of the scale **tones**. The scale tones are identified, not according to their order in a scale, but according to their distance on the keyboard, either up or down, to the first scale degree which is known as the tonic note of the scale! Picture the tonic in the center, as shown below:



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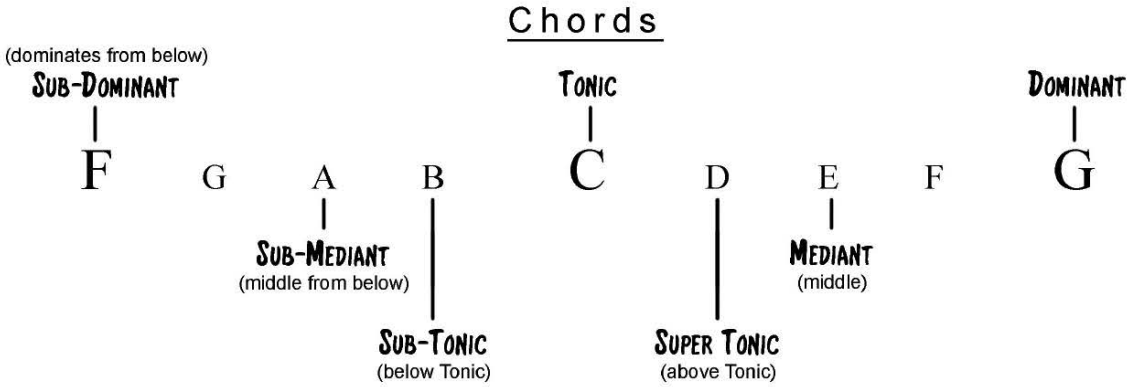
Building a chord on each tone of C's scale, we find that the chords have the same names as the scale degrees except for the B chord. The C, F, and G chords are indicated in larger letters because they are the Primary Chords (major chords) in the scale:




A chord built on the Tonic scale degree of a major scale is the Tonic Chord; a chord build on the Super Tonic scale degree of a major scale is the Super Tonic Chord, etc. The only exception is when the 7th tone is used singularly; it is called the Leading Tone. When a chord is built on the seventh tone it is a Sub-Tonic Chord.

| Roman Numeral | Chord | Chord Type | Status | Scale Degree |
|---|---|---|---|---|
| I | C e g | Major | Primary Chord | Tonic |
| ii | D f a | Minor | Secondary Chord | Super Tonic |
| iii | E g b | Minor | Secondary Chord | Mediant |
| IV | F a c | Major | Primary Chord | Sub-Dominant |
| $V^7$ | G b d f | Major | Primary Chord | Dominant 7th |
| vi | A c e | Minor | Secondary Chord | Sub-Mediant |
| $vii^o$ | B d f | Diminished | Secondary Chord | Sub-Tonic |

So what do these chords built on scale degrees tell us about the various chords' functions?




**Tonic** tells us that that is the controlling tone of all the tones in that scale.

**Super Tonic** "Super" means "above" so it is the tone above the tonic. The chord built on the second tone of the scale is also called the Super Tonic.

**Mediant** means the tone that is in the middle between the Tonic tone and the Dominant tone. "Mediant" means "middle". A chord built on that middle tone is the Mediant chord.

**Sub-Dominant** is the tone that dominates from a **fifth below** the Tonic.



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"Sub" means "below". Its chord wants to move up a fifth to the tonic chord. A chord built on the fourth tone is an important chord, but not as important as the Dominant Seventh Chord. *(Some musicians wrongly think the fourth tone is called the "Sub-Dominant" because it is a whole step below the Dominant fifth tone. Hah! Now you know the real reason the fourth tone is called the Sub-Dominant! It is a **fifth below** the Tonic!)*

**Dominant Seventh** is the "moving" chord that wants desperately to move to the Tonic Chord (this will be explained in our discussion about "moving tones"). It is a four-note chord built on the fifth tone of the scale. This is a very important chord.

**Sub-Mediant** is the tone half-way between the Tonic and the lower Sub-Dominant. "Sub" means below, and "Mediant" means "Middle. The Sub-Mediant is a minor third below the tonic but is the sixth tone of a major scale.

**Sub-Tonic** is what the name implies: "sub" means "below" so it is the chord built on the tone a half-step below the Tonic. In major scales, the Sub-Tonic chord is always diminished. This diminished chord will function as a Dominant Seventh chord with the root note of the chord missing or "invisible". The Sub-Tonic chord wants to move to the Tonic chord just as the Dominant Seventh chord wants to move to the Tonic chord.

# Chord Movements

On the previous few pages you learned how to build chords and you learned each chord's scale degree name. It is now time to understand how the chords want to "move."

Here is how chords naturally want to move in order of strongest movement:



| | |
|---|---|
| strongest | down a 5th |
| ↓ | up a 5th |
| ↓ | down a 3rd |
| ↓ | up a 3rd |
| ↓ | down a 2nd |
| weakest | up a 2nd |

The knowledge about how chords naturally want to move tells us our options for what chord to go to next when we are writing music. The root note (lowest note) of each chord is the tone that



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determines the direction the chord wants to move. Think only about the root note when thinking about intervals between chords.

# Chord Movement Brainteasers

### Brainteaser #1

Your composition's harmony starts on a C chord.

You have many options for which chord to move to next.

You decide to move down a 3rd to the _____ (A or G?) chord.

From there you move down a 3rd to the _____ (F or D?) chord.

Next, you move down a 3rd to the _____ (D or F?) chord.

This chord pulls strongly down a 5th to the _____ (A or G?) chord.

This takes you down a 5th to your tonic chord, which is the _____ (E or C?) chord.

THE ABOVE CHORD PROGRESSION IS ONE OF THE AUTHOR'S FAVORITES. YOU'LL PROBABLY USE IT MANY TIMES, ALSO.




### Brainteaser #2

You start your composition's harmony on a C chord.

You choose to go down a 5th to the _____ chord.

From there you go up a 3rd to the _____ chord.

Next you go down a 5th to the _____ chord;

Down a 5th to the _____ chord;

Down a 5th to the _____ chord, which you know is the tonic chord. Yea!

AGAIN, THE ABOVE CHORD PROGRESSION IS A GOOD ONE USED BY THE AUTHOR MANY TIMES.



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**Brainteaser #3**

You are writing a composition in C major. You begin the harmony on a C chord.

Then you decide to go down a 5th to the _____ chord;

then down a 3rd to the _____ chord.

Even though that chord wants to pull you down a fifth to a $G^7$ chord, you choose instead to go up a 5th to the _____ chord.

That chord goes down a 2nd to the _____ chord;

which moves you beautifully down a 5th to the tonic chord of _____.

Once again you have chosen great chord progressions!



**Brainteaser #4**

You are busily composing your composition's harmony and are on a **D Chord**. You need to get back to the C chord (the tonic chord) with only **three chord changes**.

You choose to move up a 5th to the _____ chord.

Then you move down a 3rd to the _____ chord.

You to move up a 5th to the _____ chord which is the tonic chord!

Yea! How did you do?

**Brainteaser #5**

You want to write a great accompaniment for your beautiful melodic line. You started out with a C chord (because your composition is in C major). You have **four chord changes** to get your composition to the $G^7$ chord (which will end the first phrase of your Tune A.)

So, being on a C chord, you decide to move up a 3rd to the _____ chord;

then down a 5th to the _____ chord.

Next you move down a 5th to the _____ chord;

which pulls you down a 5th to the _____ chord.



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**Brainteaser #6**

Imagine that you are harmonizing the first phrase of your Tune A. You are on a C chord (because, again, your composition is in C major) and you want to get to the $G^7$ chord to end the first phrase. You have five chord changes to take your composition from C to $G^7$. Can you do it?

From the C chord you choose to move up a 2nd to the _____ chord.

Then you move up a 5th to the _____ chord.

You move back down a 3rd to the _____ chord.

From that chord you move down a 3rd to the _____ chord,

which pulls you down a 5th to the _____ chord.

**And you're there!** Hooray!



You have probably noticed that we have *not used the B chord* in any of these brainteasers. This is because the B chord is a diminished chord (two minor thirds). The B chord really functions in your music like a $G^7$ chord, but with the G missing! So if you move to a B chord, think of it as a $G^7$ and allow the B chord to move to the C chord, just like the $G^7$ chord wants to move to the C chord.

**Brainteaser #7**

You are busily writing chords for your great melody, when you realize that you are only a few measures away from the end of your composition, and you are on a C chord. You don't want to end your composition yet! What to do?

From the C chord you decide to move up a 5th to the _____ chord,

then down a 2nd to the _____ chord,

then down a 5th to the _____ chord (which functions like a $G^7$ chord) and

takes you immediately down a 5th (from the invisible G) to the _____ chord which is the tonic chord. And you're "home"! Hooray for you!



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Answers to Brainteasers: **#1:** C A F D G C, **#2** C F A D G C, **#3** C F D A G C, **#4** D A F C, **#5** C E A D $G^7$, **#6** C D A F D $G^7$, **#7** C G F B C

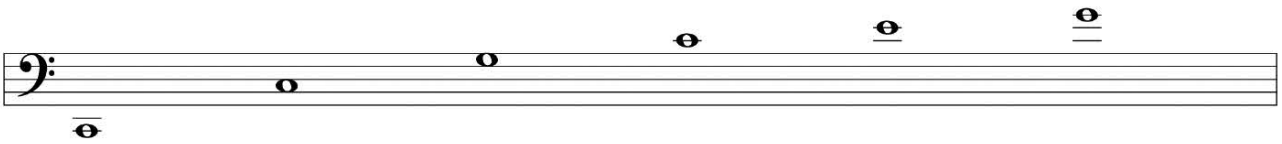
# The Overtone Series

As you know, the most important chord of every major scale is the Tonic chord and it dominates all the other tones in the scale. All the other tones are pulled toward the three tones of the Tonic chord as if those three tones are magnets. But again, you are probably asking "why?"

The reason for the magnetic pull of the Tonic chord lies in the Overtone Series. Here's how the overtone series works:

Using an acoustic piano, strike a low C and then depress the damper pedal. Pretty soon, tones start sounding that are "sympathetic" with low C's vibrating string. This means that the "sympathetic" tones vibrate at almost the same frequency as low C's tone. The first tone you should hear is the C an octave higher, then the G a fifth above, then another higher C, then an E, and then a G. There are more, higher tones that are impossible for most people to hear so we won't discuss them.

The author confesses that she has never been able to hear all the overtones like everyone else claims that they can hear! But, undaunted, shown below is what one is *supposed* to hear:



The above tones act as magnets for all of the other tones in the scale. In the above Overtone Series, since there are three Cs, C is the strongest magnet tone. Since there are two Gs, G is the second strongest magnet tone. And since there is one E, E is the third strongest magnet tone.

All three of these tones, C E G, form the tonic chord of C's scale, which makes the tonic chord incredibly strong and thus the most important chord of all the seven chords that can be constructed with the unaltered tones of C's scale.





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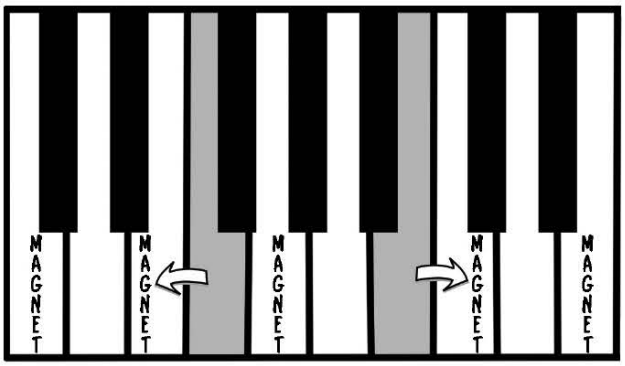
# Moving Tones

Let's look again at the configuration of the C major scale magnet tones as they appear on a piano keyboard:




The grayed keys above are showing you the two "unstable" or "moving" tones in C's scale, which are **F** and **B**, because both are only a half-step away from one of C's magnet tones (which you know from the overtone series are C E G).

The $G^7$ chord contains **both** of the unstable tones: G **B** D **F**. You cannot end a composition on the $G^7$ chord because the two unstable tones tell the listener that there is "more music coming". The two unstable tones in the $G^7$ chord, also known as the $V^7$ chord or Dominant $7^{th}$, pull very strongly to the Tonic Chord of C E G.

The $vii^o$, B's chord, also contains **both** of the unstable tones: **B** D **F**, therefore, just like the $G^7$ chord, the $vii^o$ chord pulls very strongly to the Tonic Chord.



# Dominant of a Dominant

The D chord often moves to the $G^7$ chord because the D chord is a fifth above G, and you know that all chords' strongest preference of movement is down a fifth. So the D chord is often referred to as the "dominant of the dominant". Another way to say the same thing: The ii chord often functions as the dominant to the $V^7$ chord.



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